

Characterization of α -matrices*

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Abstract

In this talk we show practical characterizations for the classes of $\alpha 1$ -matrices and $\alpha 2$ -matrices, which are subclasses of (nonsingular) H -matrices. The characterizations introduced allow a better comprehension of these kind of matrices in the sense that they bound the parameter α that actually defines each class. As an application of these results, and following the technique introduced in previous works, we also show some properties of the subdirect sum (a generalization of the usual sum) of $\alpha 1$ -matrices and the subdirect sum of $\alpha 2$ -matrices.

Keywords

H -matrices, α -matrices, Overlapping blocks, Subdirect sum.

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